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ABSTRACT

Within Australian contexts, and within a dialogic, constructivist framework, this paper reports the development of an instrument (COMCOMP) designed to measure perceptions of communication competence among others at the interpersonal-organizational interface and the use of COMCOMP to identify personal characteristics and skills associated with communication competence as relevant goals for training. The paper also reports on an associated study that examined the relationship between self-perceptions of communication competence and selected social psychological and communication variables, namely cognitive complexity, social perspective taking ability, and communication sensitivity. The paper notes that although the personal characteristics and skills associated with communication competence in others are clearly related to the broad skills areas of empathy and sensitivity, these broad skills areas are only weakly related to attribution of communication competence in the self. In addition, the paper analyzes the implications for business educators of these findings. (Author/HOD)

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# COMMUNICATION COMPETENCE AND SOCIAL INTERACTION SKILLS IN AUSTRALIAN BUSINESS ORGANIZATIONS

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ABSTRACT:

Within Australian contexts, and within a dialogic, constructivist framework, this paper reports the development of an instrument (COMCOMP) designed to measure perceptions of communication competence among others at the interpersonal-organizational interface and the use of COMCOMP to identify personal characteristics and skills associated with communication competence as relevant goals for training. The paper also reports on an associated study which examined the relationship between self-perceptions of communication competence and selected social psychological and communication variables, namely cognitive complexity, social perspective taking ability, and communication sensitivity. The principal finding of the studies was that although the personal characteristics and skills associated with communication competence in others are clearly related to the broad skills areas of empathy and sensitivity, these broad skills areas are only weakly related to attribution of communication competence in the self. Implications for business educators of these findings are analysed. This paper synthesises conference material presented as:

Irwin, H. (1982). A constructivist-based communication competence scale for face-to-face interaction at the interpersonal-organizational interface, paper presented to Section 33 (Communication), 52nd Conference of Australian and New Zealand Association for the Advancement of Science, Sydney, Australia.

Irwin, H. (1982). Social cognitive correlates of manager communication effectiveness and their implications for the development of social interaction skills in Australian organizations, paper presented at Advanced Seminar in Organizational Communication, Australian Communication Association, Sydney, Australia.

Irwin, H. (1984). Communication competence: Two applied studies in Australian organizational settings, paper presented to Research Academy of the Conference of the International Association for Business Communicators, Montreal, Canada.

In communication theory building and research, little attention has been paid to the interface between individuals and organizations. Despite studies such as those conducted by Weinrauch and Swanda (1975) and Di Salvo, Larsen and Seiler (1976) which support the conclusion that the principal type of communication within organizations is oral, interpersonal in nature, and occurs face-to-face or in small groups, the study of organizational communication is often kept separate from the study of interpersonal communication. Understanding communication in business organizations involves study of the interpersonal-organizational interface: the research reported in this paper was conducted at this interface in Australian business organizations and addresses two principal questions. First, it seeks to identify personal skills associated with perception in others of communication competence. Second, it examines relationships between self-perceptions of communication competence and selected social psychological and communication variables, namely cognitive complexity, social perspective taking, and communication sensitivity. Following reports of investigations into these two questions, the paper examines implications of their findings for business education.

## COMMUNICATION EFFECTIVENESS: THE NOTION OF COMMUNICATION COMPETENCE

Notions of interpersonal competence originated with White (1959) and were first applied in organizational contexts by Argyris (1962, 1965). Early work in the field tended to be theoretical rather than empirical (Bennis, Schein, Steele, and Berlew, 1968; Argyle, 1969; Bochner and Kelley, 1974). Research was hampered by definitional problems (both of communication and communication competence), the relativity of "effective communication", the associated difficulty of establishing criteria to help guide judgements

about competency, and the resultant problem of constructing suitable measuring instruments.

Mechanistic, linear, or monologic views of communication which focused on message transmission have largely been replaced by multi-directional, dialogic views which focus on the sharing of meaning (Irwin, 1982a). For the purposes of the research reported in this study, communication is accepted to be "the reciprocal creation or construction of meaning" (Delia and O'Keefe, 1979). This definition is in accord with contemporary views of interpersonal communication and allows a working definition of communication competence: if it is accepted that communication is the reciprocal creation or construction of meaning, it follows that a communicatively competent person is one who is competent in facilitating the reciprocal creation or construction of meaning.

Views of communication which stress construction of meaning as central to the process are compatible with what has been termed the constructivist approach to the study of human interaction (Delia, 1977, Delia and O'Keefe, 1982). As an assumptive system, constructivism holds that the "meaning of a person" is constructed or created by himself or herself and by others from the personal characteristics (physical and psychological constructs) perceived to be possessed by that person, that is, attributed to that person. The constructivist approach is grounded in Kelly's (1955) personal construct theory. Processes of person construction can be informed by theories of person perception or impression formation (Cook, 1979; Hastorf, Schneider and Polefka, 1970; Ichheiser, 1970) and attribution theory (Jones, Kanouse, Kelley, Nisbett, Valins, and Weiner, 1972; Kelley,

1973; Shaver, 1975; Warr and Knapper, 1968; Wegner and Vallacher, 1977). Constructivism, person perception theory, and attribution theory complement one another and offer a basis for investigating face-to-face communication in organizations. The constructivist approach, operationalized via person perception and attribution, is the basis upon which measurement instruments used in the present study have been developed.

## IDENTIFICATION OF PERSONAL SKILLS AND CHARACTERISTICS ASSOCIATED WITH COMMUNICATION COMPETENCE IN BUSINESS ORGANIZATIONS

### Instrument development

In the investigations reported in this paper, the research tool used to measure communication competence at the interpersonal-organizational interface was a COMCOMP instrument developed for the study. The COMCOMP instrument is in semantic differential (SD) form and is designed to measure dimensions of perceived or attributed interpersonal communication competence in Australian business organizations.

In a semantic differential scale, the concepts are the stimuli to which the subject's checking operation is a response. They are the notions whose meaning is the subject of investigation. As the purpose of using the COMCOMP instrument in this study was to determine the perceived or attributed (psychological or connotative) meanings associated with communication competence or lack of it, the concepts used clearly had to relate to communication competence. The concepts "good communicator" and "poor communicator" were chosen in preference to "effective communicator" and "ineffective communicator" and "competent communicator" and "incompetent communicator" because they are more common in everyday use and because they are less emotive.

Judgements of effectiveness of communication require some standardization of the view of what communication means, as the word is capable of so many varying interpretations. In accord with the meaning centred view of human communication which holds that communication involves the reciprocal creation of meaning, communication was operationally defined on the instrument in lay terms as the "sharing of information, ideas, and feelings as well as the transmission of messages". Further, in order that responses related to stabilized attributions, that is, dispositional as distinct from episodic attributions, the instrument directed respondents to identify, for the purpose of responding to the instrument, "good" and "poor" communicators with whom they had had extended on the job contact, "extended" being specified as a period exceeding 3 months.

Each version of the instrument (i.e. for "good" and "poor" communicators) used 50 identical items or scales. As Gough has written:

> "One of the research needs of any psychological enterprise which is concerned with the study of description of human behavior, especially in its interpersonal and interactional aspects, is the a set of descriptive terms which is (a) meaningful (b) sufficiently complex in scope to cover the ordinary range of behavior observed, and (c) susceptible of systematic analysis." (1960: 107)

The development of scale anchors for the COMCOMP instrument was a task which met these three criteria. Adjectives were chosen in preference to alternatives such as nouns or descriptive phrases or sentences because, as Osgood et al. (1957) have pointed out, adjectives are in more widespread everyday use as qualifiers. This view is supported by Gough, who suggests that the solution to the problem of finding suitable descriptors of behaviour lies in turning to the language of everyday life because everyday descriptors are immediately meaningful: he goes on to point out that "adjectives...are

the natural language of description" (1960: 109). The use of adjectives as scale anchors is also supported by Nunnally who has argued that "much of meaning can be, and usually is, communicated with adjectives". (1978: 608)

Adjective pairs (opposites) selected for use in the study were derived from an analysis of the contemporary literature of interpersonal and organizational communication, the Adjective Check List (Johnson, 1972: 29-30); from Osgood et al. (1957: 37), and from data collected by the author in an earlier study of a group of Sydney business personnel. The scales were randomly arranged on the instrument, with 20 having their polarity reversed to counteract response bias. For the purpose of reporting results graphically in this paper, the scales have been restructured with positive polarity standardized on the left.

Samples

Clearly, it was important that data be gathered within business organizations so that it was necessary that organizations were the source both of respondents to the instrument and reference subjects (i.e. the "good" and "poor" communicators chosen by the respondents). This ensured that the data was embedded in organizational settings and that the effects of such organization variables as organizational climate (including communication climate, structure, and the effects of power relationships) were not ignored.

The COMCOMP instrument was administered to two samples from the Sydney business and management community:

Single-business sample. At the Company's Annual Management Conference, the Scale was administered to all 28 managers (executives) of a Sydney-based contract advertising firm.

Multi-business sample. The Scale was also administered to 113 part-time students enrolled in the Bachelor of Business program at Kuring-gai College of Advanced Education. Typically, these respondents held full-time positions in business and management. Their occupational functions included sales, marketing, finance and accounting, computing, insurance, and banking.

Each sample was sensitized to an understanding of interpersonal communication processes and was aware of the view of communication as the reciprocal construction of meaning but had not been introduced to the notion of communication competence.

## Analysis of data

Results for the 28 usable responses from the single-business sample and the 112 usable responses from the multi-business sample were analysed separately. Responses to each of the 50 scales were scored numerically 1-7 after the scales were reconstructed so that positive polarity was standardized on the left. Means and standard deviations for each scale were computed, as were correlations between each scale item and total scale scores. As a measure of the effectiveness of the COMCOMP instrument in differentiating perceptions of good from poor communicators, total scale statistics were computed for

both groups, and for both samples; these are summarized in Table 1.

TABLE 1

SUMMARY OF SCALE STATISTICS, COMCOMP INSTRUMENT:

SINGLE-BUSINESS AND MULTI-BUSINESS SAMPLES

| | Mean | S.D. | Cronbach alpha |
|---|---|---|---|
| Single-business sample | | | |
| Good Communicators | 126.46* | 31.31 | .93 |
| Poor Communicators | 212.46* | 38.41 | .90 |
| Multi-business sample | | | |
| Good Communicators | 133.72# | 28.92 | .91 |
| Poor Communicators | 219.90# | 43.14 | .93 |

* difference between means significant, $p < .01$

\# difference between means significant, $p < .01$

Mean ratings of good and poor communicators for both samples were significantly different ($p < .01$) and high Cronbach alpha scores indicate high intraclass reliability or internal consistency in the scales for good and poor communicators with both samples.

Competence Profiles

Mean ratings for both good and poor communicators on each of the 50 hypothesized dimensions of competence were calculated and plotted on Figure 1 (single-business sample) and Figure 2 (multi-business sample)

to create competence profiles or "semantic maps" of people judged to be good (competent) or poor (incompetent) communicators.

For each of the 50 scales, for both samples, t-tests were carried out to determine whether a statistically significant difference occurred between mean ratings for good and poor communicators. In addition, correlations between each item and the total scale were computed for both good and poor communicators. The outcomes of these t-tests of significance and of correlational computations are also shown in Figures 1 and 2. This analysis of data allowed identification of scale items, and therefore of personal characteristics and skills, which differentiated good from poor communicators and which therefore throw light on the understanding of communicative competence at the interpersonal-organizational interface.

Three criteria were selected for application to the data summarized in Figures 1 and 2 in order to identify scale items which strongly differentiated good from poor communicators:

a) a significant difference ($p < .01$) between mean ratings of good and poor communicators

b) correlation between item and scale score (positive personal characteristic or skill) exceeding .300 for good communicators.

## FIGURE 1

## GOOD (COMPETENT) AND POOR (INCOMPETENT) COMMUNICATORS : PROFILES DERIVED FROM MEAN RATINGS ; SIGNIFICANCE OF DIFFERENCE OF MEAN RATINGS ; CORRELATIONS BETWEEN ITEM AND SCALE SCORES

SINGLE-BUSINESS SAMPLE N = 28

| r between item and scale score for good communicators where $r \geq .300$ | Profiles derived from mean ratings of good and poor communicators | r between item and scale score for poor communicators where $r \geq .300$ | Difference mean rating significant $p < .01$ |
|---|---|---|---|
| .529 | 1. confident ___ : ___ : ___ : ___ : ___ : ___ : ___ hesitant | | • |
| | 2. assertive ___ : ___ : ___ : ___ : ___ : ___ : ___ non-assertive | | • |
| .388 | 3. non-aggressive ___ : ___ : ___ : ___ : ___ : ___ : ___ aggressive | | |
| .401 | 4. affectionate ___ : ___ : ___ : ___ : ___ : ___ : ___ hostile | .324 | • |
| .606 | 5. pleasant ___ : ___ : ___ : ___ : ___ : ___ : ___ unpleasant | .314 | • |
| .369 | 6. patient ___ : ___ : ___ : ___ : ___ : ___ : ___ impatient | | • |
| .411 | 7. approachable ___ : ___ : ___ : ___ : ___ : ___ : ___ unapproachable | .742 | • |
| .661 | 8. warm ___ : ___ : ___ : ___ : ___ : ___ : ___ cold | .630 | • |
| .690 | 9. open ___ : ___ : ___ : ___ : ___ : ___ : ___ closed | .598 | • |
| .731 | 10. sincere ___ : ___ : ___ : ___ : ___ : ___ : ___ insincere | .605 | • |
| .510 | 11. polite ___ : ___ : ___ : ___ : ___ : ___ : ___ rude | | • |
| .685 | 12. friendly ___ : ___ : ___ : ___ : ___ : ___ : ___ unfriendly | .530 | • |
| | 13. calm ___ : ___ : ___ : ___ : ___ : ___ : ___ agitated | | • |
| .340 | 14. aware ___ : ___ : ___ : ___ : ___ : ___ : ___ unaware | .564 | • |
| .821 | 15. revealing ___ : ___ : ___ : ___ : ___ : ___ : ___ defensive | .500 | • |
| .422 | 16. sensitive ___ : ___ : ___ : ___ : ___ : ___ : ___ insensitive | .565 | • |
| | 17. active ___ : ___ : ___ : ___ : ___ : ___ : ___ passive | | • |
| | 18. self-assured ___ : ___ : ___ : ___ : ___ : ___ : ___ self-conscious | | • |
| .443 | 19. sociable ___ : ___ : ___ : ___ : ___ : ___ : ___ unsociable | .590 | • |
| .598 | 20. sympathetic ___ : ___ : ___ : ___ : ___ : ___ : ___ unsympathetic | .684 | • |
| | 21. predictable ___ : ___ : ___ : ___ : ___ : ___ : ___ unpredictable | .466 | • |
| .433 | 22. outgoing ___ : ___ : ___ : ___ : ___ : ___ : ___ withdrawn | .367 | • |
| .212 | 23. trusting ___ : ___ : ___ : ___ : ___ : ___ : ___ non-trusting | .400 | • |
| .812 | 24. trustworthy ___ : ___ : ___ : ___ : ___ : ___ : ___ untrustworthy | .530 | • |
| .504 | 25. accepting ___ : ___ : ___ : ___ : ___ : ___ : ___ rejecting | .353 | • |

———— good communicators

– – – – – poor communicators

NOTE: Above scales have been re-structured so that hypothesized positive polarity is standardized on the left.

FIGURE 1 (continued)

GOOD (COMPETENT) AND POOR (INCOMPETENT) COMMUNICATORS :

PROFILES DERIVED FROM MEAN RATINGS ; SIGNIFICANCE OF DIFFERENCE

OF MEAN RATINGS ; CORRELATIONS BETWEEN ITEM AND SCALE SCORES

SINGLE-BUSINESS SAMPLE N = 28

| r between item and scale score for good communicators where r > .300 | Profiles derived from mean ratings of good and poor communicators | r between item and scale score for poor communicators where r > .300 | Difference in mean rating significant p < .01 |
|---|---|---|---|
| .629 | 26. straightforward ___ : ___ : ___ : ___ : ___ : ___ : ___ manipulative | .418 | • |
| | 27. clear ___ : ___ : ___ : ___ : ___ : ___ : ___ vague | .508 | • |
| .646 | 28. attentive ___ : ___ : ___ : ___ : ___ : ___ : ___ inattentive | | • |
| .481 | 29. relaxed ___ : ___ : ___ : ___ : ___ : ___ : ___ tense | .398 | • |
| .690 | 30. honest ___ : ___ : ___ : ___ : ___ : ___ : ___ dishonest | .664 | • |
| .335 | 31. happy ___ : ___ : ___ : ___ : ___ : ___ : ___ sad | .540 | • |
| | 32. positive ___ : ___ : ___ : ___ : ___ : ___ : ___ negative | .628 | • |
| | 33. strong ___ : ___ : ___ : ___ : ___ : ___ : ___ weak | | • |
| .601 | 34. tactful ___ : ___ : ___ : ___ : ___ : ___ : ___ untactful | | • |
| | 35. soft ___ : ___ : ___ : ___ : ___ : ___ : ___ loud | | |
| | 36. unemotional ___ : ___ : ___ : ___ : ___ : ___ : ___ emotional | | |
| .504 | 37. responsive ___ : ___ : ___ : ___ : ___ : ___ : ___ unresponsive | .686 | • |
| .629 | 38. appreciative ___ : ___ : ___ : ___ : ___ : ___ : ___ unappreciative | .773 | • |
| | 39. spontaneous ___ : ___ : ___ : ___ : ___ : ___ : ___ restrained | | • |
| .516 | 40. perceptive ___ : ___ : ___ : ___ : ___ : ___ : ___ unperceptive | .444 | • |
| .694 | 41. caring ___ : ___ : ___ : ___ : ___ : ___ : ___ uncaring | .689 | • |
| .650 | 42. fair ___ : ___ : ___ : ___ : ___ : ___ : ___ unfair | .749 | • |
| .693 | 43. consistent ___ : ___ : ___ : ___ : ___ : ___ : ___ inconsistent | .420 | • |
| | 44. modest ___ : ___ : ___ : ___ : ___ : ___ : ___ immodest | .391 | |
| .363 | 45. reasonable ___ : ___ : ___ : ___ : ___ : ___ : ___ unreasonable | .670 | • |
| .634 | 46. open-minded ___ : ___ : ___ : ___ : ___ : ___ : ___ dogmatic | .553 | • |
| .728 | 47. supportive ___ : ___ : ___ : ___ : ___ : ___ : ___ non-supportive | .563 | • |
| .675 | 48. logical ___ : ___ : ___ : ___ : ___ : ___ : ___ illogical | .428 | • |
| .604 | 49. clear ___ : ___ : ___ : ___ : ___ : ___ : ___ hazy | .441 | • |
| | 50. extroverted ___ : ___ : ___ : ___ : ___ : ___ : ___ introverted | | • |

NOTE: Above scales have been re-structured so that hypothesized positive polarity is standardized on the left.

FIGURE 2

GOOD (COMPETENT) AND POOR (INCOMPETENT) COMMUNICATORS : PROFILES DERIVED FROM MEAN RATINGS ; SIGNIFICANCE OF DIFFERENCE OF MEAN RATINGS ; CORRELATIONS BETWEEN ITEM AND SCALE SCORES

MULTI-BUSINESS SAMPLE N = 112

| r between item and scale score for good communicators where r > .300 | Profiles derived from mean ratings of good and poor communicators | r between item and scale score for poor communicators where r > .300 | Difference in mean rating significant p < .01 |
|---|---|---|---|
| | 1. confident — hesitant | | • |
| | 2. assertive — non-assertive | | • |
| | 3. non-aggressive — aggressive | | |
| .389 | 4. affectionate — hostile | .508 | • |
| .546 | 5. pleasant — unpleasant | .494 | • |
| .405 | 6. patient — impatient | .436 | • |
| .417 | 7. approachable — unapproachable | .556 | • |
| .564 | 8. warm — cold | .644 | • |
| .497 | 9. open — closed | .477 | • |
| .593 | 10. sincere — insincere | .685 | • |
| .561 | 11. polite — rude | .610 | • |
| .600 | 12. friendly — unfriendly | .689 | • |
| .504 | 13. calm — agitated | .516 | • |
| .545 | 14. aware — unaware | .362 | • |
| .372 | 15. revealing — defensive | .301 | • |
| .361 | 16. sensitive — insensitive | .554 | • |
| | 17. active — passive | | • |
| | 18. self-assured — self-conscious | | • |
| .434 | 19. sociable — unsociable | .435 | • |
| .460 | 20. sympathetic — unsympathetic | .699 | • |
| | 21. predictable — unpredictable | .409 | • |
| | 22. outgoing — withdrawn | | • |
| .466 | 23. trusting — non-trusting | .665 | • |
| .545 | 24. trustworthy — untrustworthy | .561 | • |
| .530 | 25. accepting — rejecting | .753 | • |

———— good communicators

– – – – – poor communicators

NOTE: Above scales have been re-structured so that hypothesized positive polarity is standardized on the left.

FIGURE 2 (continued)

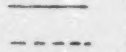
GOOD (COMPETENT) AND POOR (INCOMPETENT) COMMUNICATORS :

PROFILES DERIVED FROM MEAN RATINGS ; SIGNIFICANCE OF DIFFERENCE

OF MEAN RATINGS ; CORRELATIONS BETWEEN ITEM AND SCALE SCORES

MULTI-BUSINESS SAMPLE N = 112

| r between item and scale score for good communicators where r > .300 | Profiles derived from mean ratings of good and poor communicators | r between item and scale score for poor communicators where r > .300 | Difference in mean rating significant p < .01 |
|---|---|---|---|
| .514 | 26. straightforward ___ : ___ : ___ : ___ : ___ : ___ : ___ manipulative | .430 | • |
| .574 | 27. clear ___ : ___ : ___ : ___ : ___ : ___ : ___ vague | .406 | • |
| .508 | 28. attentive ___ : ___ : ___ : ___ : ___ : ___ : ___ inattentive | .535 | • |
| .420 | 29. relaxed ___ : ___ : ___ : ___ : ___ : ___ : ___ tense | .374 | • |
| .558 | 30. honest ___ : ___ : ___ : ___ : ___ : ___ : ___ dishonest | .623 | • |
| .441 | 31. happy ___ : ___ : ___ : ___ : ___ : ___ : ___ sad | .599 | • |
| .353 | 32. positive ___ : ___ : ___ : ___ : ___ : ___ : ___ negative | .505 | • |
| .327 | 33. strong ___ : ___ : ___ : ___ : ___ : ___ : ___ weak | | • |
| .501 | 34. tactful ___ : ___ : ___ : ___ : ___ : ___ : ___ untactful | .508 | • |
| | 35. soft ___ : ___ : ___ : ___ : ___ : ___ : ___ loud | | |
| | 36. unemotional ___ : ___ : ___ : ___ : ___ : ___ : ___ emotional | | |
| .595 | 37. responsive ___ : ___ : ___ : ___ : ___ : ___ : ___ unresponsive | .535 | • |
| .482 | 38. appreciative ___ : ___ : ___ : ___ : ___ : ___ : ___ unappreciative | .671 | • |
| | 39. spontaneous ___ : ___ : ___ : ___ : ___ : ___ : ___ restrained | | • |
| .467 | 40. perceptive ___ : ___ : ___ : ___ : ___ : ___ : ___ unperceptive | .488 | • |
| .617 | 41. caring ___ : ___ : ___ : ___ : ___ : ___ : ___ uncaring | .628 | • |
| .520 | 42. fair ___ : ___ : ___ : ___ : ___ : ___ : ___ unfair | .682 | • |
| .560 | 43. consistent ___ : ___ : ___ : ___ : ___ : ___ : ___ inconsistent | .607 | • |
| .309 | 44. modest ___ : ___ : ___ : ___ : ___ : ___ : ___ immodest | .548 | • |
| .632 | 45. reasonable ___ : ___ : ___ : ___ : ___ : ___ : ___ unreasonable | .668 | • |
| .547 | 46. open-minded ___ : ___ : ___ : ___ : ___ : ___ : ___ dogmatic | .574 | • |
| .482 | 47. supportive ___ : ___ : ___ : ___ : ___ : ___ : ___ non-supportive | .517 | • |
| .519 | 48. logical ___ : ___ : ___ : ___ : ___ : ___ : ___ illogical | .628 | • |
| .556 | 49. clear ___ : ___ : ___ : ___ : ___ : ___ : ___ hazy | .509 | • |
| | 50. extroverted ___ : ___ : ___ : ___ : ___ : ___ : ___ introverted | | • |




NOTE: Above scales have been re-structured so that hypothesized positive polarity is standardized on the left.

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c) correlation between item and scale score (negative personal characteristic or skill) exceeding .300 for poor communicators.

Application of these criteria independently to each of the samples yielded a set of 30 common personal characteristics and skills which were attributed to those who were perceived as good communicators. In each case, their opposites, as defined by the instrument, were attributed to those who were perceived as poor communicators.

To these 30 personal characteristics and skills were added another 4 which met each of the three criteria with the multi-firm sample and two of the three criteria (a and b above) with the single-firm sample. In the case of these four scale items, with this sample, the positive personal characteristic or skill was attributed to good communicators but their opposite, the negative personal characteristic or skill, was not attributed to poor communicators. As the objective of the exercise was to identify a set of positive personal characteristics or skills as the basis for better understanding communication competence, these 4 were judged worthy of inclusion. There were no scale items in a similar category of meeting all criteria with the single-business sample and two of the three criteria with the multi-business sample.

The result of this analysis of data from Figures 1 and 2 was thus a set of 34 positive personal characteristics and skills which are clearly attributed to people perceived as competent communicators and

which therefore assist in the identification of communicatively competent persons in business organizations.

Further instrument development and refinement

To this point, perceptions and attributions of communication competence used in instrument development were gathered from lay judges, that is business people working in organizational environments. With the object of improving the discriminatory power of the instrument, the 34 scale items which survived the previously explained item analysis were exposed to experts in the fields of interpersonal and organizational communication. This refinement phase had the particular goal of establishing the association between each and generally accepted major areas of communication competency.

For this purpose an instrument known as the Components of Communication Competency Questionnaire was devised. It arrayed the 34 positive adjective descriptors associated with communication competence in that part of the study outlined above, against 5 major communication competency areas identified

in the literature. These were (1) competency in empathic communication including competency in listening and descriptiveness; (2) competency in "owning" feelings and thoughts and constructively disclosing them; (3) competency in establishing a smooth and easy pattern of interaction; (4) competency in assertiveness; (5) competency to appropriately adapt to different others. Thus the response sheets consisted of a 34 x 5 matrix which allowed respondents to indicate their opinions about the association between communication competency expressed in terms of major competencies and in terms of personal characteristics and skills.

The Components of Communication Competency Questionnaire was administered to a constructed sample of 40 experts in communication. Respondents were primarily employed as lecturers in tertiary educational institutions or as counsellors and were engaged in the training of business personnel, counsellors, and teachers.

All 40 questionnaires were returned and were usable. Data from individual responses were transferred to a frequency distribution table and summarized. Results are shown in Table 2, which shows the strength of the perceived relationship between each of the 34 personal characteristics and skills and each of the five major communication areas identified in the literature review. In effect, the numbers recorded in the columns of Table 2 represent the number of "votes" out of a possible 40 awarded by experts in interpersonal communication and thus represent a summary of the strength of the perceived relationship.

TABLE 2.

JUDGEMENTS BY EXPERTS IN INTERPERSONAL COMMUNICATION (N = 40) OF ASSOCIATION BETWEEN:

. PERSONAL CHARACTERISTICS AND SKILLS ATTRIBUTED TO PERSONS PERCEIVED AS COMMUNICATIVELY COMPETENT

and . MAJOR COMMUNICATION COMPETENCY AREAS IDENTIFIED IN THE LITERATURE.

MAJOR COMPETENCY AREAS IDENTIFIED IN THE LITERATURE

| Personal characteristics and skills attributed to persons perceived as communicatively competent | Competency in empathic communication including competency in listening and descriptiveness | Competency in "owning" feelings and thoughts and constructively disclosing them | Competency in establishing and sustaining a smooth and easy pattern of interaction | Competency in assertiveness | Competency to appropriately adapt to different others | % of attainable "votes" after those for competency in assertiveness discarded |
|---|---|---|---|---|---|---|
| affectionate | 16 | 18 | 7 | 6 | 10 | 31.88 |
| pleasant | 23 | 11 | 32 | 8 | 20 | 53.75 |
| patient | 33 | 11 | 27 | 6 | 26 | 60.63 |
| approachable | 33 | 15 | 34 | 10 | 29 | 69.38 |
| warm | 29 | 23 | 26 | 7 | 24 | 63.75 |
| open | 30 | 36 | 18 | 25 | 29 | 70.63 |
| sincere | 34 | 33 | 21 | 26 | 28 | 72.50 |
| polite | 18 | 12 | 31 | 17 | 23 | 52.50 |
| friendly | 26 | 20 | 32 | 10 | 23 | 63.13 |
| aware | 36 | 30 | 25 | 20 | 31 | 76.25 |
| revealing | 13 | 35 | 5 | 21 | 9 | 38.75 |
| sensitive | 35 | 30 | 28 | 14 | 35 | 80.00 |
| sociable | 16 | 14 | 33 | 16 | 24 | 54.38 |
| sympathetic | 30 | 16 | 14 | 5 | 26 | 53.76 |
| trusting | 24 | 31 | 10 | 9 | 16 | 50.63 |
| trustworthy | 27 | 21 | 14 | 13 | 19 | 50.63 |
| accepting | 33 | 22 | 20 | 9 | 31 | 66.25 |
| straightforward | 12 | 25 | 13 | 33 | 10 | 37.50 |
| attentive | 38 | 13 | 13 | 10 | 28 | 68.13 |
| relaxed | 28 | 20 | 30 | 18 | 22 | 62.50 |
| honest | 24 | 35 | 10 | 26 | 14 | 51.88 |
| happy | 9 | 8 | 13 | 5 | 13 | 26.88 |
| tactful | 22 | 21 | 33 | 17 | 26 | 63.75 |
| responsive | 35 | 26 | 28 | 13 | 31 | 75.00 |
| appreciative | 20 | 11 | 25 | 6 | 23 | 49.38 |
| perceptive | 38 | 27 | 29 | 17 | 33 | 79.38 |
| caring | 35 | 21 | 19 | 9 | 27 | 63.75 |
| fair | 17 | 16 | 24 | 19 | 27 | 49.38 |
| consistent | 15 | 15 | 26 | 21 | 13 | 43.13 |
| reasonable | 15 | 16 | 24 | 16 | 25 | 50.00 |
| open-minded | 31 | 25 | 18 | 12 | 38 | 70.00 |
| supportive | 31 | 18 | 20 | 5 | 25 | 58.75 |
| logical | 13 | 15 | 18 | 16 | 9 | 34.38 |
| clear | 18 | 23 | 22 | 23 | 17 | 50.00 |
| No. of "votes" | 857 | 717 | 759 | 482 | 779 | |
| % of attainable "votes" by competency area | 53.01% | 52.43% | 55.81% | 35.44% | 57.28% | |

NOTE: Figures in each of the five competency area columns represent "votes" of association out of a possible score of 40 (N = 40)

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In addition, when these numbers had been entered, they were totalled vertically by columns yielding five totals each of which summarized "votes" by the interpersonal communication experts, thus enabling the five major communication areas to be ranked in terms of the perceived extent to which they were associated with the personal characteristics and skills identified initially by persons engaged in full-time employment in business organizations. These rankings are also shown in Table 2.

One notable outcome of this procedure was that it revealed the relative unimportance of the relationship between the general competency area of assertiveness and the descriptors associated with communicative competence, with the strength of this association failing by a margin of nearly 15% to reach the 50% criterion level adopted. A partial explanation for this may be in the fact that descriptors of a number of personal characteristics and skills which might be expected to be associated with assertiveness, such as confident, assertive, and self-assured, did not appear in the Components of Communication Competency Questionnaire because they were among the 16 eliminated by the prior analysis of data gathered from the two business samples.

Even allowing for this, however, "votes" for the relationship between "competency in assertiveness" and the 34 personal characteristics and skills were relatively low as can be gleaned from Table 2. In addition, despite the invitation to provide additional comment included with the questionnaire no respondent commented about the absence of

assertiveness or confidence from the listed descriptors. Clearly, both those with a lay knowledge of face-to-face interaction in organizations and experts in the field of interpersonal communication were agreed as to the lack of importance of assertiveness in discriminating competent from incompetent communicators at the interpersonal-organizational interface.

Given these findings with respect to assertiveness, further tabulation based upon the data about relationships ignored entries in the "competency in assertiveness" column. This being the case, "votes" were summed horizontally across each of the four remaining major competency area columns for each of the 34 descriptors of personal characteristics and skills and the resultant total was expressed in each case as a percentage of the total possible score of 160 (N = 40 x 4). These percentages, which summarized the strength of importance of each of the 34 personal characteristics and skills when related to the four acceptable major communication competency areas, are shown in the final column of Table 2.

These percentage figures, summarizing as they did the strength of the perceived relationships (a measure of agreement between lay and expert judges), were the basis for the elimination of a further 8 items of the 34 included in the table. This further reduction was carried out by applying a 50% criterion level to these percentages, retaining an item only if the strength of the relationship exceeded 50%. This procedure yielded 26 items for retention in the final COMCOMP instrument. These are set out in Table 3.

TABLE 3

DESCRIPTORS OF PERSONAL CHARACTERISTICS AND SKILLS ASSOCIATED WITH COMMUNICATION COMPETENCE ACCEPTABLE TO BOTH LAY AND EXPERT JUDGES

| | |
|---|---|
| *5. pleasant | 24. trustworthy |
| 6. patient | 25. accepting |
| 7. approachable | 28. attentive |
| 8. warm | 29. relaxed |
| 9. open | 30. honest |
| 10. sincere | 34. tactful |
| 11. polite | 37. responsive |
| 12. friendly | 40. perceptive |
| 14. aware | 41. caring |
| 16. sensitive | 45. reasonable |
| 19. sociable | 46. open-minded |
| 20. sympathetic | 47. supportive |
| 23. trusting | 49. clear |

* numbers refer to item numbers in the COMCOMP instrument.

The 26 personal characteristics and skills listed in Table 3 thus are attributed by both lay and expert judges as being associated with communication competence. Subsequent use of the COMCOMP instrument, in both other-report and self-report form, has involved scoring only the 26 items identified in Table 3.

## SOCIAL COGNITIVE CORRELATES OF SELF-PERCEPTIONS OF COMMUNICATION EFFECTIVENESS IN ORGANIZATIONS

The remainder of this paper reports an investigation which further probed the notion of communication competence in organizations. The investigation outlined below sought to discover the association between self-perceptions of communication competence in the organizational setting and three selected social psychological and communication variables, namely cognitive complexity in the interpersonal domain (COGCOMP), social perspective taking (SPT) and rhetorical or communication sensitivity (RS). The latter two of these areas were clearly related to the four relevant major competency areas identified in the previous section of this report and much effort in management communication training has emphasised the importance of empathy or social perspective taking and of sensitivity (Day, 1977: 232-235).

The remaining variable, cognitive complexity in the interpersonal domain, that is the complexity of a person's construct system as it applies to other persons, was selected for inclusion in the study as a result of the association which has emerged between it and social perspective taking in a number of recent studies conducted in the United States (for example, Hale and Delia, 1976; Clark and Delia, 1977; Ritter, 1979; Applegate and Delia, 1980). All of these studies adopted a constructivist perspective and open-ended theory-free data gathering methods. Given the consistency of findings in the studies cited above, the relative speed and ease of data gathering, and the high reliability of scoring procedures the decision was taken to

include cognitive complexity (COGCOMP) in the present investigation.

Cognitive complexity in the interpersonal domain

Since the publication of Kelly's (1955) work on personal construct theory, considerable interest has been aroused in the concept of cognitive complexity in the interpersonal domain. Bieri (1955), Leventhal (1957), Mayo and Crockett (1964), and Todd and Rapaport (1964) showed early interest in the field of cognitive complexity and its application to person perception. However, Crockett's (1965) substantial summary and review contribution on cognitive complexity and impression formation in Volume 2 of Progress in Experimental Personality Research was the work that paved the way for arousal of interest in cognitive complexity among communication scholars.

Writing of the concept of the complexity of cognitive systems in general, Crockett (1965: 49) has said that a cognitive system will be considered relatively complex if it contains a relatively large number of elements. Crockett's view clearly emphasises the relativity of cognitive complexity: absolute standards cannot be applied to judgements of complexity but the degrees of complexity of two or more cognitive systems may be compared. The assumption of relativity is also a characteristic of Crockett's view of the complexity of interpersonal constructs, which holds that an interpersonal cognitive system can be termed complex if it contains a relatively large number of interpersonal constructs.

Measurement of cognitive complexity in the present study

Because it is clearly impossible to measure an individual's total set of interpersonal constructs in order to effect a full determination of the degree of differentiation of that person's cognitive system, it is necessary to rely upon samples of constructs obtained from standardized situations so that those identified are a sample of the total set available to the person.

In the present study data about cognitive complexity (COGCOMP) was gathered by asking subjects to provide five-minute written descriptions for each of two people they knew, one whom they liked and one whom they disliked. In each case they were asked to describe the person saying what they knew, thought, and felt about the other. Thus the task of describing others involved the use of personal constructs expressed as physical and psychological characteristics and behaviours. In this way, subjects revealed, through the descriptions, the relative extent of the construct systems they used in thinking about others. (Hale and Delia, 1975; Ritter, 1979).

The COGCOMP score for each subject was derived by totalling the number of interpersonal constructs used in the two person descriptions. Inter-coder reliability for this task was 0.99 by Pearson r. This very high correlation is similar to the 0.98 correlation for a similar

task recorded by Ritter (1979: 44) and is attributable to the ease of scoring on this task.

Social perspective taking and empathy

Social perspective taking is a term commonly applied in the communication literature to refer to the process of taking the perspective or viewpoint of the other in social interaction. More specifically, social perspective taking has two dimensions: it involves the ability to perceive a situation from the point of view of the other and it involves the ability to select an appropriate response to the situation, a response which acknowledges and responds to the situation. Social perspective taking ability is often referred to as empathic ability.

Mead (1934) saw empathy as the capacity to take the role of the other and regarded it as the essence of social intelligence. Since then, this view of social perspective taking which sees empathy as a sensitivity to the needs and feelings of others has been a major element in the study of interpersonal behaviour. According to role-theoretical accounts of interpersonal behaviour, "social interaction is greatly facilitated by the disposition or ability to anticipate or construe the feelings, expectations, and informational requirements of others." (Greif and Hogan, 1973: 280). Conversely, the absence of empathic ability is seen as a hindrance to social interaction.

A pre-requisite to empathic behaviour is empathic understanding. Barrett-Lennard has provided a clear statement of empathic understanding:

> "Qualitatively it (empathic understanding) is an active process of desiring to know the full, present and changing awareness of another person, of reaching out to receive his communication and meaning, and of translating his words and signs into experienced meaning that matches at least those aspects of his awareness that are most important to him at the moment. It is an experiencing of the consciousness 'behind' another's outward communication, but with continuous awareness that this consciousness is originating and proceeding in the other."
> (1962, cited in 1976: 174)

Empathic understanding is an "inner" process and may not be proceeded beyond. It may occur outside of the physical presence of the other. Often however, empathic understanding is followed or accompanied by expressive empathic behaviour (Barrett-Lennard, 1976: 177). Expressive empathic behaviour can be either acknowledging behaviour or responding behaviour, or both (Ritter, 1979: 45-47). Acknowledging empathic behaviour makes it explicit to the other that his or her thoughts, ideas, or feelings have been received and are understood. It involves an acknowledgement of those thoughts, ideas, or feelings. On the other hand, responding empathic behaviour is behaviour which embodies a response to thoughts, ideas or feelings.

Measurement of social perspective taking in the present study

The social perspective taking (SPT) instrument developed for the present study involved a task adapted for business settings from one developed by Ritter (1979). Subjects were asked to provide a three minute written response to a social problem situation in which they were assumed to be involved. They were asked to assume that they and

a friend had applied for promotion within their organization and that they had openly said that promotion was easy to obtain and that neither they nor the friend would fail to be promoted. They were then told to further assume that they had gained promotion but the friend had not and that they had discovered that their friend's feelings had been hurt by what they had said. Given these assumptions they were faced with the question "what would you now say to your friend"?

The SPT score was derived by analysing responses to the SPT task using a coding system developed from that used for a similar task by Ritter (1979: 45-46). Each response was decomposed to yield two scores, one of acknowledgement of the feelings of others and one of response to feelings of others. Scores were derived for the two category sets (acknowledgement of and response to the feelings of others) and totalled. Each of these sets was hierarchically ordered from lowest level to highest level in terms of the perspective taking ability implied in the response to the situation set by the task. For coding purposes, four levels (0, 1, 2, 3) were adopted for each category. In each case the lowest level, 0, was used to record failure to make an explicit acknowledgement of or response to the feelings of the other. Failure to make an explicit acknowledgement or response assumed that the other knows the speaker and knows he or she has hurt the feelings of the other and this reflects inability to view the situation from the perspective of the other.

The next level, 1, includes statements which acknowledge that the other will be upset because of the situation, and responses aiming to "repair" the situation by explanation or providing reparations. In each case the reaction is low level because the respondent remains embedded in his or her own perspective system and attempts to deal with the problem externally rather than by attention to the other's feelings.

Level 2 reactions to the situation include statements that acknowledge that the other's feelings have been hurt by the speaker and responses that try to modify the other's feelings toward the speaker either by diminishing the speaker's accomplishment or by suggesting that "luck" intervened and was responsible for the outcome. These two response strategies indicate significant capacity for perspective taking because they involve construal of the other's judgements about the importance of gaining promotion.

Reactions scored at level 3 reflect the highest level of perspective taking ability, with strategies scored at this level revealing that the speaker is aware of how his or her statements have affected the other. In the acknowledgement category, a level 3 score indicates that the speaker acknowledges that the other will be aware of the speaker's predicament. In the response category it indicates that the response attempts to deal with the other's feelings by stating a desire to deal with the feelings and restore the relationship, by encouraging

the other to modify his or her feelings, by providing reassurance, or by providing another perspective on the situation.

After reactions were coded for acknowledgement and response these two scores were totalled to yield the SPT score. Pearson r for inter-coder reliability on this task was 0.87.

Rhetorical (communication) sensitivity

The concept of rhetorical sensitivity was introduced into the communication literature by Hart and Burks (1972) and has been developed further by Hart et al. (1975), Darnell and Brockeriede (1976), and Hart et al. (1980). Hart and his associates have viewed rhetorical sensitivity, or communication sensitivity as it can alternatively be labelled, as an attitude towards encoding in face-to-face interaction which facilitates effective social interaction. Rhetorical sensitivity may be thought of as "interaction consciousness", a way of thinking about what should be said in an interaction and as a way of deciding how to say it.

Hart and Burks (1972), in their pioneer article in this field argued that the rhetorically (or communicatively) sensitive person:

> "1. tries to accept role-taking as part of the human condition
>
> 2. attempts to avoid stylized verbal behaviour
>
> 3. is characteristically willing to undergo the strain of adaption

4. seeks to distinguish between all information and information acceptable for communication, and

5. tries to understand that an idea can be rendered in multi-form ways." (1972: 76)

In an analysis of this early work of Hart and Burks, Darnell and Brockriede (1976: 175-190) introduced and developed the idea of a sensitivity continuum. They conceived of this continuum as having polar points representing what they termed "noble selves" and "reflectors" with rhetorically, or communicatively, sensitive persons occupying the mid-range position.

Thus, a clearer conception of this mid-range position emerged from examination of the nature of the polar points. According to Darnell and Brockriede (1976: 176-177), "noble selves" put the self first when making communicative choices and relegate to secondary importance, or ignore, both the other person and the pressures of the situation. They prefer monologue to dialogue and frequently seek to project their own perspectives, perceptions, and principles onto others and thus to dominate. The "noble self" they project is one in whose worth they firmly believe: it is not easily amenable to change.

At the other end of the sensitivity continuum, "reflectors" present a new self to each person with whom they interact and to each new situation in which they find themselves. They seek to please others and be liked and they make communicative choices according to the perceived needs and wishes of others, behaving as they perceive others

want them to behave.

Lying between these two polar extremes are what Darnell and Brockriede (1976: 179-182) call sensitive persons. Such persons are seen to possess a "repertoire of selves" from which they select in any given communication experience. They are capable of multiple perspective taking, basing their communicative choices in an attempt to blend their perspectives and those of others. They are dialoguists who seek power parity in interaction. Because they risk change through interaction, sensitive persons must live with uncertainty.

As no time was this sensitivity, termed rhetorical sensitivity by Hart and his associates, suggested to be synonymous with communication competence. In fact, they stressed in their analyses of rhetorical sensitivity (Hart, et al., 1975:2, Hart, et al., 1980: 2) that the concept referred to an attitude towards encoding in communication and was not a behavioural guideline for measuring interpersonal competence.

The relationship between rhetorical sensitivity and communication competence suggests itself as worthy of exploration, however, because rhetorical sensitivity embodies an approach to face-to-face interaction that might reasonably be expected, for example on the basis of the literature reviews reported earlier in this study, to be a necessary pre-requisite for effective communication. This being the case, it would be reasonable to expect high levels of self-perceived communication competence to be accompanied by high levels of rhetorical

sensitivity. The hypothesized relationship is based on the assumption that highly communicatively (rhetorically) sensitive people would be more competent communicators because of their sensitivity and they would, again because of their high level of sensitivity and alertness to the communication situation, perceive themselves to be highly effective communicators.

Against this, however, it may be that people who are highly communicatively (rhetorically) sensitive are so aware of the nuances of interpersonal communication events and their own impacts upon these events that they come to seriously doubt their own effectiveness and, accordingly, record low perceptions of their own communicative competence. Conversely, it may be that people who rate lowly on communication sensitivity, because of their lack of awareness of the communication situation, are unaware of their own shortcomings, see themselves as effective communicators, and rate themselves accordingly.

No research exploring the relationships between communicative (rhetorical) sensitivity and measures specifically developed to index self-perceptions of communication competence for business and management personnel has been reported. The decision to explore this association in the present study was made because of the implications it has for the understanding of communication competence and for the training of business and management personnel. With regard to the latter, if the association is a strong one the case for communication sensitivity training is clearly strengthened. In the event, however,

that the association is a negative one the need to ensure that sensitivity training did not have a detrimental effect upon self-perceptions of communication competence would be highlighted.

Measurement of rhetorical (communication) sensitivity: the RHETSEN scale

Rhetorical (communication)sensitity (RS) was measured in the present study using the RHETSEN scale and scoring procedures developed by Hart et al. (1980). Subjects choose from Likert-type options to reveal their attitudes to encoding in specified interaction contexts. These interaction contexts represent a wide variety of face-to-face situations and demand decisions from subjects about what it is appropriate to say in each situation and/or how it is appropriate to say it. The RHETSEN scale contains twelve "dummy" items to overcome any problems of response set and yields a score on the range 0-56. Analysis of data gathered with the instrument with a sample of over 3000 United States college students in 1978 revealed an alpha reliability of .76 and a test-retest reliability of .84 (Hart et al., 1980: 8).

Data collection and sampling

The self-report COMCOMP instrument, together with the instruments adopted to measure cognitive complexity in the interpersonal domain, (COGCOMP), social perspective taking (SPT), and rhetorical or communication sensitivity (RS) were included together in a four-part questionnaire. This questionnaire was administered to a sample (N=107; 85 males, 22 females) consisting of all part-time students enrolled in the first year of the Bachelor of Business degree at

Kuring-gai College of Advanced Education.

Thus, respondents were drawn from work environments in business and management contexts. The sample comprised mature-age adults attending evening classes. These students typically held full time management and business positions during the day and were studying for a degree in financial and administrative studies at night. Occupational categories included sales, marketing, purchasing, finance and accounting, computing, insurance, and banking.

Purpose and method of data analysis

Data were analysed to test for associations between COMCOMP as the criterion variable and COGCOMP, SPT, and RS as predictor variables. The particular end purpose of the analysis was to partition the variance of COMCOMP, the criterion variable, so that conclusions might be drawn about the contributions made by COGCOMP, SPT, and RS to self-perception of communication competence. In turn, this type of analysis allowed an assessment to be made of the likely effects upon self-perception of communication competence of training in the development of cognitive complexity in the interpersonal domain, of training in empathy or social perspective taking, and of rhetorical (or communication) sensitivity training.

Analysis of data was conducted with the aid of the SPSS Subprogram Regression (Kim and Kohout, 1975). This procedure provided output to allow:

a) examination of zero-order correlations between COMCOMP as the criterion variable and COGCOMP, SPT, and RS as predictor variables, together with correlations among the predictor variables

b) development of a regression equation to predict COMCOMP from COGCOMP, SPT, and RS scores in combination

c) subsequent commonality analysis to partition the variance in the multivariate regression into unique and conjoint effects.

Analysis of correlations

Correlation matrix for variables included in the study

Table 4 shows a correlation matrix for all variables included in the study. These data will be discussed in the following sections.

TABLE 4

PEARSON r CORRELATIONS AMONG SELF-PERCEPTIONS OF COMMUNICATION COMPETENCE (COMCOMP), COGNITIVE COMPLEXITY (COGCOMP), SOCIAL PERSPECTIVE TAKING (SPT), AND RHETORICAL SENSITIVITY (RS): N = 107

| | COMCOMP | COGCOMP | SPT | RS |
|---|---|---|---|---|
| COMCOMP | - | | | |
| COGCOMP | -0.03 | - | | |
| SPT | 0.16* | 0.24** | - | |
| RS | -0.19* | -0.09 | 0.19* | - |

* $p < .05$

** $p < .01$

Correlations between criterion variable (COMCOMP) and predictor variables (COGCOMP, SPT, RS)

The generally low magnitude of correlations between the predictor variables and the criterion variable are apparent from the first column in Table 4. The only positive correlation was one of 0.16 between COMCOMP and SPT, with this relationship being significant ($p < .05$). Correlations between COMCOMP and COGCOMP and RS were -0.03 and -0.19 respectively, the latter relationship being significant ($p < .05$).

The pattern of relationships between the predictor variables and the criterion variable revealed by Table 4 suggests that the COMCOMP instrument has tapped a new and different theoretical space, that is,

it measures a constuct theoretically distant from those measured by the other instruments which made up the four-part questionnaire.

Correlations among predictor variables (COGCOMP, SPT, RS)

On the basis of the studies from the United States, upon which the decision to include cognitive complexity and social perspective taking in the present study was taken, and which have been outlined earlier, it was expected that a positive correlation would occur between COGCOMP and SPT. Table 4 shows that this relationship materialized, with the 0.24 correlation between these two predictor variables being statistically significant ($p < .01$). Table 5 also reveals a low, positive correlation of 0.19 between SPT and RS ($p < .05$). Because intercorrelations among the predictor variables are of a similar order of magnitude it is worthwhile attempting to separate the unique contributions (partial correlations) made by the predictors. Commonality analysis conducted for this purpose is reported below following details of regression analysis.

Regression equation to predict COMCOMP from COGCOMP, SPT, and RS scores

The zero order correlations reported in Table 4 and discussed in the previous sections make only a limited contribution to understanding the relationship between the criterion variable (COMCOMP) and the predictor variables (COGCOMP, SPT, RS). Zero order correlation analysis examined the effects of the variables separately.

A multiple regression analysis, carried out using the SPSS Subprogram

Regression (Kim and Kohout, 1975), enabled the effects of the predictor variables to be examined in combination. To enable interpretation of the relative contribution of the variables, the regression equation derived from the regression analysis is expressed in standard form using beta weights:

$$ZCOMCOMP = -.24Z_{RS} - .11Z_{COGCOMP} + .23Z_{SPT}$$

The multiple regression analysis revealed an $R^2$ of 0.08361. Thus the predictors, in combination, accounted for 8.4% of the variance in COMCOMP. This contribution to the variance of COMCOMP is a small one.

Commonality analysis to partition the variance of COMCOMP into unique and common variances

As indicated above, the similar order of magnitude of the intercorrelations among the predictor variables (COGCOMP, SPT, RS) suggested the use of commonality analysis to partition the variance of the criterion variable (COMCOMP) into unique and common variances in an attempt to identify the relative influences of the predictor variables. Commonality analysis allows identification of the confounded contribution of the predictors which exists because of the correlations that occur between them, and is advocated by Kerlinger and Pedhazur (1973: 297-305), Cooley and Lohnes (1976: 218-228), and Baumgart (1977: 124). Commonality analysis allows the effect of each variable to be specified separately: this is particularly useful in the event that one variable

is prevented from making its contribution clear in other types of analysis because of its correlation with another predictor.

Table 5 sets out the results of commonality analysis to partition the variance of COMCOMP. Although all three predictor variables were included in a full analysis, Table 5 reports the analysis for only two of the variables, SPT and RS. For each of these variables, as shown in Table 4, correlations with the criterion variable reached statistical significance. As the correlation between COGCOMP and the criterion variable was not significant, COGCOMP is excluded from the results of commonality analysis reported in Table 5.

TABLE 5

PARTITIONING OF VARIANCE FOR

COMCOMP BY COMMONALITY ANALYSIS: N = 107

| | Variables | |
|---|---|---|
| | SPT | PS |
| Unique to 1 (SPT) | .0377 | |
| Unique to 2 (RS) | | .0489 |
| Common to 1 and 2 | -.0134 | -.0134 |
| $\sum$: | .0243 | .0355 |

Commonality analysis, summarized in Table 5, shows that the unique contributions of SPT and RS to explaining the variance of COMCOMP were 3.77% and 4.89% respectively. This commonality analysis demonstrates that the unique contributions made to the variance of COMCOMP by SPT and RS is small, totalling 8.66%.

## IMPLICATIONS FOR MANAGEMENT COMMUNICATION EDUCATION OF THE FINDINGS OF THIS STUDY

The use of empathy and sensitivity training in programs whose goals are improvement in management communication effectiveness is supported by the investigation reported in the early part of this paper. There, it was shown that personal characteristics and skills attributed to communicatively competent persons in management and business settings are associated with empathy and communication sensitivity.

However, the research question addressed in the second investigation reported in this paper has produced findings apparently in contradiction to those earlier findings, by demonstrating that ability in social perspective taking (empathy) and communication sensitivity are each associated in only a minor way with self-perceptions of a high level of communication effectiveness among business and management personnel in organizational settings. Thus while empathy and sensitivity are strongly associated with attributions of communication effectiveness in <u>others</u>, they are only very weakly related to attributions of communication effectiveness in the <u>self</u>.

This finding has important implications for management communication education. It strongly suggests that, because ability in social perspective taking and communication do not contribute significantly to self-perceptions of communication competence, it may be difficult to motivate students and trainees to see the worth of empathy training and sensitivity training. Yet ability in these areas has been demonstrated to be important when perceptions are of others. Thus educators and trainers working with business and management students appear to have a "marketing problem": they need to develop effective ways of "selling" empathy training and communication sensitivity training to course participants. Business personnel and managers participating in coursework which aims to improve social interaction skills in organizations need to be made more aware of the beneficial effects in everyday face-to-face interactions within organizations of possessing personal characteristics and skills associated with empathy and sensitivity.

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